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RESULTS OF THE ALCOA FOUNDATION-SURINAME EXPEDITIONS. V. NOTEWORTHY RECORDS OF SURINAMESE MAMMALS

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ABSTRACT

The occurrence of seven species of mammals previously unknown in Suriname is documented. The new taxa recorded include *Didelphis albiventris, Peropteryx macrotis, Lonchorhina aurita, Micronycteris hirsuta, Vampyrodes caraccioli, Furipterus horrens,* and *Thyroptera discifera.* Additional information is provided on several species already known to occur in Suriname, including *Metachirus nudicaudatus, Peronymus leucopterus, Mimon bennettii, Tonatia carrikeri, T. schulzi, Anoura geoffroyi, Choerniscus intermedius, Mesophylla macconnelli, Neacomys guianae, Holochilus brasiliensis,* and *Potos flavus.*

INTRODUCTION

Recent field work in Suriname has resulted in collection of specimens of 18 species of mammals that were unknown previously from there or known only by a few specimens. Records of two species of

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marsupials are included, one of which was not previously recorded, bringing the number of marsupials known from the country to 11. We have significant new records of two rodents and one carnivore, but none of these represents species new to the fauna.

Currently, 86 species of bats are known to occur in Suriname (Husson, 1978; Genoways and Williams, 1979, 1980; Williams and Genoways, 1980*a*, 1980*b*). Six species are herein reported for the first time from the country. Significant new information also is provided for seven previously recorded species of bats. The number of species of Chiroptera now known to occur in Suriname is 92.

Methods and Materials

All specimens collected were prepared as standard museum skins accompanied by skulls, or were preserved in fluid. Supplemental data recorded for most of these specimens included standard karyotypes, live tissue for chromosomal banding, and frozen tissue for electrophoretic analysis. The specimens are deposited in the Section of Mammals of Carnegie Museum of Natural History and a synoptic series will be returned to Suriname in care of Stichting Natuurbehoud Suriname (STINASU) for deposition in their reference collection.

Forearm and cranial dimensions were taken by means of dial calipers accurate to 0.1 mm. External measurements, recorded in millimeters, are those of the collector and were taken in the field. Forearm and cranial measurements were taken as described by Genoways and Williams (1979).

Field weights in grams were taken with Pesola spring scales. The reproductive condition of standard museum specimens was determined by gross dissection in the field, whereas fluid-preserved specimens were dissected in the laboratory. Crown-rump length of fetuses and testes length of males are recorded in millimeters.

Acknowledgments

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Species Accounts

Didelphis albiventris Lund

Specimen examined (1).—Brokopondo: Brownsberg Nature Park, 3 km S, 20 km W Afobakka, 4°58′N, 55°10′W, 1.

The geographic distribution of *Didelphis albiventris* in South America is shaped like a large "U" (Hershkovitz, 1969). An arm of the

range extends along the Andes from western Venezuela (Handley, 1976) and Colombia southward and eastward into the northern half of Argentina and then northward into the eastern half of Brazil. In north-central South America, Hershkovitz (1969) reports this species from one area of Brazil and three in southern Venezuela. In this area, the species evidently is confined to isolated "tepuis" or eroded tablelands of the pre-Cambrian Guianan shield. Hershkovitz (1969) pointed out that mammalian fauna of Guianan Highlands consists only of wide ranging species with two exceptions, *Didelphis albiventris* and *Podoxomys roraimae*. Therefore, obtaining a specimen of *D. albiventris* on the Brownsberg Plateau is of considerable interest and indicates that, even though this area is not a "tepui," it does possess one of the unique species of the Guianan faunal complex.

Our specimen is a subadult male (age class 3 of Gardner, 1973) trapped on the night of 7 July 1977. It was taken in a trap set on the ground in an area of mature rainforest. There was little ground cover in the area. Other species of mammals taken in the area were *Monodelphis brevicaudata, Oryzomys capito,* and *Proechimys guyannensis*. Testes of the specimen were 21 long.

Hershkovitz (1969) gave the reasons for the use of the name *D. albiventris* in place of *D. azarae,* which was used previously for this species. *D. albiventris* currently is considered to be monotypic. External and cranial measurements of our specimen are as follows: total length, 690; length of tail, 268; length of hind foot, 53; length of ear, 56; greatest length of skull, 79.8; condylobasal length, 79.0; zygomatic breadth, 41.0; mastoid breadth, 23.7; postorbital breadth, 10.1; length of maxillary toothrow (C-M3), 31.1; breadth across upper molars, 26.8. The specimen weighed 564.

Metachirus nudicaudatus nudicaudatus (É. Geoffroy-St. Hilaire)

Specimen examined (1).—SURINAME: Powaka, 5°26′N, 55°04′W, 1.

As pointed out by Husson (1978), it is difficult to assess early records of this opossum from Suriname because it often was confused with *Philander opossum*. Husson (1978) was able to verify only three specimens from the country. One of these was taken near Republiek and the other two near Zanderij. The specimen listed above is from this same part of the country.

Our specimen is an adult male (length of testes, 9) that was trapped on 9 August 1977. It was taken in a swampy area adjacent to a small stream in a trap that was placed on the branch of a fallen tree about 2 m above the ground. The vegetation in the area was secondary gallery forest. Other marsupials obtained here were *Didelphis marsupialis* and *Philander opossum*. A specimen of *P. opossum* was taken in a trap set within 10 m of the one in which our *M. nudicaudatus* was taken.

The type locality of *M. n. nudicaudatus* is Cayenne, French Guiana; therefore, we assign our specimen to that subspecies. External and cranial measurements of our specimen are as follows: total length, 602; length of tail, 336; length of hind foot, 47; length of ear, 38; greatest length of skull, 58.3; condylobasal length, 57.8; zygomatic breadth, 28.7; mastoid breadth, 17.5; postorbital breadth, 9.7; length of maxillary toothrow (C-M3), 24.1; breadth across upper molars, 17.5. The specimen weighed 410.

Peronymus leucopterus leucopterus (Peters)

Specimen examined (1).—PARA: Zanderij, 5°27′N, 55°12′W, 1.

The only specimens of this species previously recorded from Suriname were the type series, which probably came from near Albina (Husson, 1978). The one here reported is from about 130 km west of Albina.

Our specimen is an adult male in which the testes measured 3 when obtained on 18 May 1980. This individual was taken in a mist net set in an area of tall secondary forest with some areas being cleared beneath the canopy. Uncleared areas had moderately dense stands of undergrowth. The net was placed across a relatively wide (4 m) trail near a dry culvert. Other species of bats taken in the same area included *Cormura brevirostris, Saccopteryx leptura, Phyllostomus discolor, P. elongatus, Tonatia silvicola, Trachops cirrhosus, Artibeus* sp., and *Eptesicus brasiliensis*.

Measurements of our specimen are as follows: length of forearm, 41.2; greatest length of skull, 15.1; condylobasal length, 13.8; zygomatic breadth, 9.6; mastoid breadth, 7.7; postorbital breadth, 3.3; length of maxillary toothrow, 5.9; breadth across upper molars, 6.8.

Peropteryx macrotis macrotis (Wagner)

Specimens examined (10).—SARAMACCA: Voltzberg, 4°40′N, 56°12′W, 10.

Although this species is known from most of the northern half of South America (Sanborn, 1937), it has not been reported previously from Suriname (Husson, 1978). We found this bat to be abundant in small caves and crevices along the steep slope of the Voltzberg. Some individuals were seen during the day roosting near the entrances to the caves where it was not necessary to use headlamps to see them. Other *P. macrotis* also were located deep in caves where there was little light. Some individuals were captured during the day with nets set inside the caves. Nets set at night at the entrances to the caves and crevices captured additional specimens.

Of the 10 specimens that we collected on the nights of 11 to 13 May 1980, six were males and four were females. Recorded testes lengths

for males are 3, 3, 3, and 4. A female taken on the night of 12 May was carrying a single fetus that measured 18 in crown-rump length. The other three females evinced no gross reproductive activity.

The measurements of our specimens agree with those given by Sanborn (1937) for this subspecies. *P. macrotis* is distinctly smaller than *P. kappleri* which was recorded previously from Suriname by Husson (1978). Both Husson and Sanborn discussed other characteristics of these species. External and cranial measurements for three males and one female, respectively, are as follows: length of forearm, 40.2, 44.2, 42.8, 45.9; greatest length of skull, 13.9, 14.5, 14.4, 14.9; condylobasal length, 12.2, 13.1, 12.9, 13.3; zygomatic breadth, 7.9, 8.4, 8.2, 8.5; mastoid breadth, 7.2, 7.4, 7.2, 7.3; postorbital breadth, 2.6, 2.7, 2.6, 2.6; length of maxillary toothrow, 5.3, 5.8, 5.7, 5.9; breadth across upper molars, 5.9, 6.0, 6.1, 6.4.

Lonchorhina aurita aurita Tomes

Specimens examined (3).—NICKERIE: Avanavero, 4°52′N, 57°21′W, 3.

These three specimens represent the first record of this unique species from Suriname. The species was known previously from Colombia, Venezuela, Trinidad, and Brazil in northern South America (Cunha Vieira, 1942; Goodwin and Greenhall, 1961; Handley, 1976; Hernández and Cadena, 1978; Jones and Carter, 1976; Linares and Ojasti, 1971).

The three specimens are adult females. One, taken on 26 May 1980, was pregnant with a fetus that measured 18 in crown-rump length. The other two females, taken on 24 May, evinced no gross reproductive activity. Nets in which these individuals were taken were set across a path through old secondary tropical forest. Other bats taken at this place were *Cormura brevirostris, Pteronotus parnellii, Micronycteris minuta, M. nicefori, Glossophaga soricina, Lonchophylla thomasi, Carollia perspicillata, Artibeus* sp., *Sturnira lilium, Uroderma bilobatum, Vampyrops helleri,* and *Vampyrodes carraccioli.*

Hernández and Cadena (1978) recognized two subspecies of *L. aurita* in South America, of which *L. a. aurita* is the one found in the northeastern part of the continent. External and cranial measurements of two of these specimens are as follows: length of forearm, 54.5, 53.9; greatest length of skull, 22.3, 22.7; condylobasal length, 20.5, 20.7; zygomatic breadth, 11.4, 11.6; mastoid breadth, 11.2, 11.5; postorbital breadth, 5.0, 5.3; length of the maxillary toothrow, 7.6, 7.5; breadth across upper molars, 7.8, 7.8.

Micronycteris hirsuta (Peters)

Specimens examined (3).—NICKERIE: Kabalebo, 4°51′N, 57°24′W, 1. PARA: Zanderij, 5°27′N, 55°12′W, 2.

These are the first specimens of the species to be reported from Suriname. Our records are about 200 km and 350 km, respectively, east and probably slightly south of the nearest record, which is in Guyana (Hill, 1964). Elsewhere in South America, this species is known from Venezuela, Trinidad, and Colombia (Handley, 1976; Goodwin and Greenhall, 1961; Jones and Carter, 1978).

The specimen from Kabalebo is an adult female that revealed no gross reproductive activity. It was taken on the night of 30 May 1980 along the edge of a small hill in an area of mixed secondary and primary lowland rainforest. The following species of bats were taken from that area: *Saccopteryx leptura, Pteronotus parnellii, Phyllostomus elongatus, P. hastatus, Tonatia silvicola, Trachops cirrhosus, Carollia perspicillata, Artibeus* sp., *Uroderma bilobatum,* and *Vampyrops helleri.* The specimens from Zanderij were taken on 18 May. One is an adult female that evinced no reproductive activity; the other is an immature female with unfused phalangeal epiphyses. The vegetation in the vicinity of Zanderij was secondary lowland rainforest. The area in which the specimens were taken was bisected with small secondary roads; much of the undergrowth had been cleared for planting rubber trees. Numerous species and individuals of bats were taken in this area, including *Cormura brevirostris, Saccopteryx bilineata, Phyllostomus discolor, P. elongatus, P. hastatus, Tonatia carrikeri, Lonchophylla thomasi, Carollia perspicillata, Rhinophylla pumilio, Artibeus* sp., *Chiroderma trinitatum, Mesophylla macconnelli, Sturnira lilium, Desmodus rotundus, Eptesicus brasiliensis, Myotis nigricans, Molossus ater,* and *M. molossus.*

Micronycteris hirsuta is considered to be a monotypic species. However, Baker et al. (1973) demonstrated that Central American and Trinidadian representatives differed chromosomally. Our specimens have a karyotype like those from Central America (Baker et al., 1981). External and cranial measurements of the adult female from Zanderij are as follows: length of forearm, 44.4; greatest length of skull, 23.6; condylobasal length, 20.4; zygomatic breadth, 11.2; mastoid breadth, 10.2; postorbital breadth, 4.9; length of maxillary toothrow, 8.9; breadth across upper molars, 7.1.

Mimon bennettii (Gray)

Specimens examined (5).—SARAMACCA: Voltzberg, 4°40′N, 56°12′W, 5.

According to Husson (1978), *Mimon bennettii* is known from Suriname by three specimens all lacking exact provenance.

Of our specimens, three were adult females that appeared to be reproductively inactive and two were adult males. Testes of the males measured 4 and 6. All specimens were taken along the northwestern side of the Voltzberg monolith on 12 May 1980. In this area huge

boulders of granite formed numerous caves and crevices. These were intermixed along the steep slopes with relatively low primary rainforest. The first specimen obtained was knocked from the wall of a small crevice by throwing a small stone at the bat. The remaining four were taken in mist nets at the mouths of small caves as they emerged from their daytime roosts or in nets set among the boulders. Three of the four specimens preserved as standard museum specimens evinced molt over much of the dorsum.

Some recent authors have considered *M. bennettii* to be conspecific with *M. cozumelae* of Middle America (Schaldach, 1965; Jones, 1966; Goodwin, 1969). However, we have chosen to consider the two as distinct species (see also Husson, 1978; Jones and Carter, 1976), because no intergradation has been shown and because there are karyotypic differences between them (Baker et al., 1981). As presently understood, *M. bennettii* is known only from Brazil (Dalquest, 1957; Handley, 1960), Guyana (Hill, 1964), and Suriname. External and cranial measurements of one male and three females, respectively, are as follows: length of forearm, 53.5, 54.6, 54.0, 52.4; greatest length of skull, 25.9, 25.9, 25.7, 25.9; condylobasal length, 22.3, 22.3, 21.7, 22.5; zygomatic breadth, 14.2, —, 13.7, 14.0; mastoid breadth, 11.6, 11.7, 11.1, 11.8; postorbital breadth, 4.7, 4.6, 4.7, 4.5; length of maxillary toothrow, 9.2, 9.1, 8.9, 9.1; breadth across upper molars, 9.6, 9.4, 9.3, 9.2.

Tonatia carrikeri (J. A. Allen)

Specimen examined (1).—PARA: Zanderij, 5°27′N, 55°12′W, 1.

Our specimen is evidently the third record of this rare species to be reported from Suriname. Husson (1978) examined one specimen without precise locality data; Williams and Genoways (1980*a*) took one at Voltzberg.

The new specimen is an adult female that was lactating when obtained on 18 May 1980. It was taken in a mist net set across a road in a rubber plantation. Vegetation in the area was secondary forest as described in the account for *Micronycteris hirsuta*.

Tonatia carrikeri is considered to be monotypic. External and cranial measurements of our specimen are as follows: length of forearm, 46.3; greatest length of skull, 25.8; condylobasal length, 20.6; zygomatic breadth, 11.6; mastoid breadth, 11.9; postorbital constriction, 13.7; length of maxillary toothrow, 8.2; breadth across upper molars, 8.0.

Tonatia schulzi Genoways and Williams

Specimens examined (2).—NICKERIE: Kayserberg Airstrip, 3°06′N, 56°29′W, 1. SARAMACCA: Raleigh Falls, 4°44′N, 56°12′W, 1.

These individuals represent the third and fourth known specimens of this recently described species (Genoways and Williams, 1980). They extend the known range about 100 km to the north and 85 km to the south-southeast from the type locality.

The specimen from Raleigh Falls was an adult male with testes measuring 7 when taken on 10 May 1980. It was taken on an island in the Coppename River that serves as the headquarters for the Raleigh Falls Nature Reserve. Mist nets were placed across a trail leading along the western side of the island. The local vegetation consisted of near-mature tropical forest with only a little understory. Other species of bats taken in this series of nets were *Saccopteryx bilineata, S. leptura, Pteronotus parnellii, Chrotopterus auritus, Phyllostomus elongatus, Tonatia silvicola, Lonchophylla thomasi, Carollia perspicillata, Rhinophylla pumilio, Artibeus* sp., *Sturnira tildae,* and *Myotis nigricans.* The specimen from the vicinity of the Kayserberg Airstrip was a male (preserved in fluid) taken on 6 May 1980. It was captured in a mist net set across a trail in an area of mature lowland rainforest. Other bats taken on this date include *Saccopteryx leptura, Pteronotus parnellii, Phyllostomus elongatus, P. hastatus, Carollia perspicillata, Artibeus* sp., and *Eptesicus brasiliensis.*

Length of forearm for the specimens as listed above are 42.7 and 44.0. Cranial measurements for the specimen from Raleigh Falls are as follows: greatest length of skull, 23.4; condylobasal length, 18.9; zygomatic breadth, 11.3; mastoid breadth, 12.1; postorbital breadth, 3.8; length of maxillary toothrow, 7.8; breadth across upper molars, 7.3. The size and other characteristics of these newly acquired specimens closely agree with those of the holotype and paratype. The unique wart-like granulations characteristic of this species are evident on the forearms, digits, hind limbs, ears, and noseleaf of the new specimens.

Anoura geoffroyi geoffroyi Gray

Specimens examined (9).—SARAMACCA: Voltzberg, 4°44′N, 56°12′W, 9.

Husson (1978) only reported specimens of *Anoura geoffroyi* from the vicinity of Tafelberg in central Suriname. Our specimens are from approximately 90 km north of that locality.

We found *A. geoffroyi* to be relatively abundant in the caves and crevices along the northwestern slope of the Voltzberg (see account for *Mimon bennettii*). Our specimens were taken during the daytime of 12 May 1980 by setting mist nets inside some of the larger caves and driving the bats from their roosts. The only other two species of bats taken, *Pteronotus parnellii* and *Carollia perspicillata,* proved to be more abundant than *A. geoffroyi.* All of the specimens were adult

males. Testes length for one specimen measured 6, for five measured 7, and for two measured 8.

Choeroniscus intermedius (J. A. Allen and Chapman)

Specimen examined (1).—PARA: Zanderij, 5°27′N, 55°12′W, 1.

This is the second locality record from Suriname for this species. It was first reported by Williams and Genoways (1980*a*) from Grassalco, approximately 190 km southwest of the new locality.

The present specimen is an adult female that showed no gross reproductive activity when taken on 20 May 1980. The specimen was collected in savannah bordering a forested area. Nets were placed in open grassland and near savannah shrubbery. Other bat species collected in the same area included *Saccopterx bilineata, S. leptura, Chiroderma villosum, Rhinophylla pumilio, Artibeus* sp., *Sturnira lilium, S. tildae, Eptesicus brasiliensis, Myotis nigricans,* and *Molossus molossus.*

There is considerable confusion surrounding the systematics of members of this genus. However, until more data are available, we follow Koopman (1978) in recognizing two species in the *minor-inca-intermedius* complex. The measurements of our specimen match those of the smaller species to which the name *intermedius* is applicable. External and cranial measurements of the present specimen are as follows: length of forearm, 34.6; greatest length of skull, 22.9; condylobasal length, 22.2; mastoid breadth, 8.3; postorbital breadth, 3.6; length of maxillary toothrow, 7.7; breadth across upper molars, 4.2.

Mesophylla macconnelli macconnelli Thomas

Specimen examined (1).—PARA: Zanderij, 5°27′N, 55°12′W, 1.

Our specimen is the third of *Mesophylla macconnelli* to be recorded from Suriname. Williams and Genoways (1980*a*) reported single specimens from the extreme northern (Nieuwe Grond Plantation) and the extreme southern (Sipaliwini Airstrip) parts of the country. The present specimen is from about 50 km to the south of the northernmost locality. It is a nonpregnant adult female that was taken on 18 May 1980. Conditions under which this specimen was taken are described in the account for *Micronycteris hirsuta.*

Two subspecies of *M. macconnelli* currently are recognized. All mainland specimens are assigned to the nominate race with the type locality in Guyana. External and cranial measurements of our specimen are as follows: length of forearm, 30.7; greatest length of skull, 17.4; condylobasal length, 15.7; zygomatic breadth, 10.0; mastoid breadth, 9.1; postorbital breadth, 4.4; length of maxillary toothrow, 5.8; breadth across upper molars, 7.1.

Vampyrodes caraccioli caraccioli (Thomas)

Specimens examined (2).—NICKERIE: Avanavero, 4°52′N, 57°21′W, 1. SARAMACCA: Raleigh Falls, 4°44′N, 56°12′W, 1.

These specimens represent the first recorded occurrence of *V. caraccioli* in Suriname. This species, which originally was described from Trinidad, is found elsewhere in northern South America (Jones and Carter, 1976) and as far south as northern Brazil and eastern Peru.

The specimen from Raleigh Falls is a nonpregnant female obtained with our specimen of *Thyroptera discifera* on 14 May 1980. The individual from Avanavero is an immature male with the phalangeal epiphyses still unfused. The pelage of this specimen is much grayer and darker than the pale brown of the adult. Length of testes of the immature specimen was 3. See the account of *Lonchorhina aurita* for the conditions under which this specimen was taken.

Length of forearm of the immature male from Avanavero is 54.3. External and cranial measurements of the female from Raleigh Falls are as follows: length of forearm, 56.5; greatest length of skull, 28.3; condylobasal length, 24.5; zygomatic breadth, 17.1; mastoid breadth, 13.2; postorbital breadth, 6.6; length of maxillary toothrow, 9.8; breadth across upper molars, 12.8.

V. caraccioli and *V. major* are considered by recent authors to be conspecific (Handley, 1966; Jones and Carter, 1976). We have followed this action and have assigned our specimens to the nominate subspecies on geographic grounds. Their measurements are much larger, however, than those given by Swanepoel and Genoways (1979) for specimens from Trinidad (type locality of *caraccioli*) and more nearly approach those from Central American specimens. Clearly, geographic variation in this species is in need of review.

We follow Carter and Dolan (1978) for the spelling of the specific name *caraccioli*.

Furipterus horrens (Cuvier)

Specimen examined (1).—SARAMACCA: Voltzberg, 4°40′N, 56°12′W, 1.

Only three specimens of this rare species have been reported previously from Suriname. One of the records is from near Kaaimanston (Sanborn, 1941), another from Ligolio (Husson, 1978), and the precise locality of the third record is unknown (Husson, 1978).

Our specimen is an adult female that evinced no gross reproductive activity when taken on 12 May 1980. The bat was obtained in the same area in which we caught *Mimon bennettii*. It was trapped in a net placed across the entrance of a small cave and crevice where our first specimen of *M. bennettii* was obtained. The bat was taken on the cave side of the net; a light rain was falling when the specimen was caught.

This species is considered to be monotypic. External and cranial measurements of our specimen are as follows: length of forearm, 35.8; greatest length of skull, 11.9; condylobasal length, 11.0; zygomatic breadth, 7.2; mastoid breadth, 6.3; postorbital breadth, 2.9; length of maxillary toothrow, 4.5; breadth across upper molars, 4.5.

Thyroptera discifera discifera (Lichtenstein and Peters)

Specimen examined (1).—SARAMACCA: Raleigh Falls, 4°44′N, 56°12′W, 1.

A male *Thyroptera discifera* taken on the night of 14 May 1980 is the first specimen of this species to be recorded from Suriname. The species is known from French Guiana (Thomas, 1928) and elsewhere in northern South America (Wilson, 1976, 1978). The other member of this genus and family, *T. tricolor,* has been recorded from Suriname previously (Husson, 1978; Honeycutt et al., 1980).

This male had testes that were 2 in length and was netted in the same area as *T. schulzi* (collected 10 May), near the headquarters of Raleigh Falls Nature Reserve. Other species of bats taken on the same night as our specimen of *T. discifera* were as follows: *Tonatia silvicola, Trachops cirrhosus, Carollia perspicillata, Rhinophylla pumilio, Artibeus* sp., and *Vampyrodes caraccioli.*

Wilson (1976) recognized two subspecies of *T. discifera* with only the nominate race occurring in South America. Husson (1978) gives characteristics to distinguish *T. discifera* and *T. tricolor.* External and cranial measurements of our specimen are as follows: length of forearm, 32.4; greatest length of skull, 14.2; condylobasal length, 13.1; zygomatic breadth, 6.8; mastoid breadth, 6.7; postorbital breadth, 2.4; length of maxillary toothrow, 5.5; breadth across upper molars, 4.6.

Holochilus brasiliensis guianae Thomas

Specimens examined (5).—NICKERIE: Sipaliwini Airstrip, 2°02′N, 56°07′W, 5.

Husson (1978) believed that this species occurred only along the coastal plain of Suriname. However, on 19 and 20 August 1979, we took this species in the extreme southern part of the country, far from the coastal plain. Our specimens were taken in a ditch along the edge of the airstrip at Sipaliwini. The vegetation of the area consisted of thick grass that was no more than a meter tall. The only other species taken along this ditch was *Oryzomys delicatus.*

Three of the specimens were adult females, one was a subadult female, and the other was an adult male. One of the adult females was found to be carrying three fetuses (crown-rump length, 4) when trapped on 20 August. The other two adult females taken on 19 August were lactating.

We have assigned our specimens to the subspecies *guianae* (type

locality Kanuko Mountains, Guyana) tentatively until further study can elucidate the relationship among populations of this species (Hershkovitz, 1955). External and cranial measurements of the four adult specimens (male followed by three females) are as follows: total length, 342, 315, 338, 300; length of tail, 145, 143, 161, 133; length of hind foot, 41, 38, 39, 38; length of ear, 20, 20, 20, 20; greatest length of skull, 37.9, 35.6, 38.4, 36.3; condylobasal length, 35.7, 34.0, 35.4, 33.9; zygomatic breadth, 21.2, 19.7, 20.1, 20.2; interorbital constriction, 4.4, 4.5, 4.2, 4.4; mastoid breadth, 14.2, 13.8, 14.0, 13.4; length of nasals, 14.7, 13.7, 13.7, 14.7; length of maxillary toothrow, 7.2, 6.8, 6.8, 7.5; length of palatal bridge, 8.1, 7.3, 7.9, 8.3.

Neacomys guianae Thomas

Specimens examined (21).—BROKOPONDO: Brownsberg Nature Park, 5 km S, 21.5 km W Afobakka, 4°56′N, 55°09′W, 1; Brownsberg Nature Park, 7 km S, 18.5 km W Afobakka, 5°55′N, 55°11′W, 8; Brownsberg Nature Park, 8 km S, 2 km W Brownsweg, 4°55′N, 55°11′W, 5; 1 km N Rudi Kappelvliegveld, 300 m, 3°48′N, 56°08′W, 1. NICKERIE: 24 km S, 60 km E Apoera, 4°41′N, 56°07′W, 1; 38 km S, 27 km E Apoera, 4°46′N, 56°55′W, 1; Grassalco, 4°46′N, 56°46′W, 1; Sipaliwini Airstrip, 2°02′N, 56°07′W, 2. SURINAME: Powaka, 5°26′N, 55°04′W, 1.

Husson (1978) reported only three specimens of this spiny mouse from Suriname. We have found the species to be widespread throughout the country but nowhere abundant. Most of our specimens were trapped in seral stages of vegetation dominated by low bushes and small secondary-growth trees. Typical areas were along the sides of roads, around the edges of gardens, and at the edges of savannas. We have not taken the species in grassy areas of savannas or under mature rain forest.

Testes lengths of three adult males taken 8 July were 6, 7, and 10, and one taken on 20 August was 6. Testes lengths of males taken in September were 6, 6, 6, 6, 7, 7, and 7. An adult female containing three fetuses with crown-rump lengths of 5 was trapped on 24 September. A lactating female was taken on 20 July. Nonpregnant adult females were taken on the following dates: 8 July; 20 July (2); 24 July; 9 August.

External and cranial measurements of two adult males and an adult female, respectively, from the Brownsberg Nature Park are as follows: total length, 155, 147, 144; length of tail, 77, 70, 70; length of hind foot, 20, 20, 18; length of ear, 13, 13, 13; greatest length of skull, 20.5, 20.1, 19.9; condylobasal length, 17.9, 18.0, 17.3; zygomatic breadth, 11.1, 11.2, —; interorbital constriction, 4.5, 4.5, 4.4; mastoid breadth, 9.4, 9.3, 9.5; length of nasals, 7.7, 7.9, 7.2; length of maxillary toothrow, 2.6, 2.6, 2.7; length of palatal bridge, 3.3, 3.5, 3.1.

Potos flavus flavus (Schreber)

Specimen examined (1).—BROKOPONDO: 1 km N Rudi Kappelvliegveld, 300 m, 3°48'N, 56°08'W, 1.

Husson (1978) only reported six specimens of kinkajous from Suriname. Of those, only three were known from precise localities, which were all in the northern part of the country. Our specimen is an adult female that was taken in the Tafelberg Nature Reserve in central Suriname. The specimen was shot as it climbed a tree in an area of mature lowland tropical forest. An adult female, it carried a single embryo when taken on 30 September 1979. Crown-rump length of the embryo was 73.

The type locality of *Potos flavus* is Suriname as corrected by Thomas (1902), and thus we have assigned our specimen to the nominate subspecies. Cranial measurements of our specimen are as follows: greatest length of skull, 75.5; condylobasal length, 69.2; zygomatic breadth, 49.1; interorbital constriction, 15.5; postorbital constriction, 22.2; mastoid breadth, 37.4; length of the maxillary toothrow, 19.7; breadth across upper molars, 22.2.

LITERATURE CITED

BAKER, R. J., H. H. GENOWAYS, W. J. BLEIER, and J. W. WARNER. 1973. Cytotypes and morphometrics of two phyllostomatid bats, *Micronycteris hirsuta* and *Vampyressa pusilla*. Occas. Papers Mus., Texas Tech Univ., 17:1–10.

BAKER, R. J., H. H. GENOWAYS, and P. A. SEYFARTH. 1981. Results of the Alcoa Foundation-Suriname Expeditions. VI. Additional chromosomal data for bats (Mammalia: Chiroptera) from Suriname. Ann. Carnegie Mus., 50:333–344.

CARTER, D. C., and P. G. DOLAN. 1978. Catalogue of type specimens of Neotropical bats in selected European museums. Spec. Publ. Mus., Texas Tech Univ., 15:1–136.

CUNHA VIERIRA, C. O. DA. 1942. Ensaio monografico sobre os Quiropteros do Brasil. Arquinos Zool., Estado de São Paulo, 3:219–471.

DALQUEST, W. W. 1957. American bats of the genus *Mimon*. Proc. Biol. Soc. Washington, 70:45–47.

GARDNER, A. L. 1973. The systematics of the genus *Didelphis* (Marsupialia: Didelphidae) in North and Middle America. Spec. Publ. Mus., Texas Tech Univ., 4:1–81.

GENOWAYS, H. H., and S. L. WILLIAMS. 1979. Records of bats (Mammalia: Chiroptera) from Suriname. Ann. Carnegie Mus., 48:323–335.

———. 1980. Results of the Alcoa Foundation-Suriname Expeditions. I. A new species of bat of the genus *Tonatia* (Mammalia: Phyllostomatidae). Ann. Carnegie Mus., 49:203–211.

GOODWIN, G. G. 1969. Mammals from the state of Oaxaca, Mexico, in the American Museum of Natural History. Bull. Amer. Mus. Nat. Hist., 141:1–269.

GOODWIN, G. G., and A. M. GREENHALL. 1961. A review of the bats of Trinidad and Tobago. Bull. Amer. Mus. Nat. Hist., 122:187–301.

HANDLEY, C. O., JR. 1960. Descriptions of new bats from Panama. Proc. U.S. Nat. Mus., 112:459–479.

———. 1966. Checklist of the mammals of Panama. Pp. 754–795, *in* Ectoparasites of Panama (R. L. Wenzel and V. J. Tipton, eds.), Field Mus. Nat. Hist., Chicago, xii + 861 pp.

———. 1976. Mammals of the Smithsonian Venezuelan Project. Brigham Young Univ. Sci. Bull., Biol. Ser., 20(5):1–89.

HERNÁNDEZ-CAMACHO, J., and A. CADENA-G. 1978. Notas para la revision del genero *Lonchorhina* (Chiroptera, Phyllostomidae). Caldasia, 12:199–251.

HERSHKOVITZ, P. 1955. South American marsh rats, genus *Holochilus,* with a summary of sigmodont rodents. Fieldiana:Zool., 37:639–673.

———. 1969. The evolution of mammals on southern continents. VI. The Recent mammals of the Neotropical Region: a zoogeographic and ecological review. Quart. Rev. Biol., 44:1–70.

HILL, J. E. 1964. Notes on bats from British Guiana, with the description of a new genus and species of Phyllostomatidae. Mammalia, 28:553–572.

HONEYCUTT, R. L., R. J. BAKER, and H. H. GENOWAYS. 1980. Results of the Alcoa Foundation-Suriname Expeditions. III. Chromosomal data for bats (Mammalia: Chiroptera) from Suriname. Ann. Carnegie Mus., 49:237–250.

HUSSON, A. M. 1978. The mammals of Suriname. Zool. Monogr., Rijksmuseum Nat. Hist., 2:xxiv + 1–569.

JONES, J. K., JR. 1966. Bats from Guatemala. Univ. Kansas Publ., Mus. Nat. Hist., 16:439–472.

JONES, J. K., JR., and D. C. CARTER. 1976. Annotated checklist, with keys to subfamilies and genera. Pp. 7–38, *in* Biology of bats of the New World family Phyllostomatidae, Part I (R. J. Baker, J. K. Jones, Jr., and D. C. Carter, eds.), Spec. Publ. Mus., Texas Tech Univ., 10:1–218.

KOOPMAN, K. F. 1978. Zoogeography of Peruvian bats with special emphasis on the role of the Andes. Amer. Mus. Novitates, 2651:1–33.

LINARES, O. J., and J. OJASTI. 1971. Una nueva especie de murcielago del genero *Lonchorhina* (Chiroptera: Phyllostomatidae) del sur de Venezuela. Novedades Cientificas, Zoo. Ser., 36:1–8.

SANBORN, C. C. 1937. American bats of the subfamily Emballonurinae. Field Mus. Nat. Hist., Zool. Ser., 20:321–354.

———. 1941. Descriptions and records of neotropical bats. Field Mus. Nat. Hist., Zool. Ser., 27:371–387.

SCHALDACH, W. J., JR. 1965. Notas breves sobre algunos mamiferos del sur de Mexico. Ann. Inst. Biol., Univ. Mexico, 35:129–137.

SWANEPOEL, P., and H. H. GENOWAYS. 1979. Morphometrics. Pp. 13–106, *in* Biology of bats of the New World family Phyllostomatidae, Part III (R. J. Baker, J. K. Jones, Jr., and D. C. Carter, eds.), Spec. Publ. Mus., Texas Tech Univ., 16:1–441.

THOMAS, O. 1902. On the geographical races of the kinkajou. Ann. Mag. Nat. Hist., ser. 7, 9:266–270.

———. 1928. The mammals of the Rio Ucayali. The Godman-Thomas expedition to Peru.—VII. Ann. Mag. Nat. Hist., ser. 10, 2:249–265.

WILLIAMS, S. L., and H. H. GENOWAYS. 1980*a*. Results of the Alcoa Foundation-Suriname Expeditions. II. Additional records of bats (Mammalia: Chiroptera) from Suriname. Ann. Carnegie Mus., 49:213–236.

———. 1980*b*. Results of the Alcoa Foundation-Suriname Expeditions. IV. A new species of bat of the genus *Molossops* (Mammalia: Molossidae). Ann. Carnegie Mus., 49:487–498.

WILSON, D. E. 1976. The subspecies of *Thyroptera discifera* (Lichtenstein and Peters). Proc. Biol. Soc. Washington, 89:305–311.

———. 1978. *Thyroptera discifera*. Mammalian Species, 104:1–3.